



Effects-based Operations



Overview



Joint Concept Development and Experimentation

- **Definitions**
- **Concept Discussion**
- **Questions**



Definition

Joint Concept Development and Experimentation



Effects

The physical, functional or psychological outcome, event, or consequence that results from specific military or non-military actions at the tactical, operational and strategic levels.



Why Effects?



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- **To understand how an action leads to an objective**
 - ▲ Causal linkages
- **To identify “all” the potential consequences of actions**
 - ▲ What else will happen
- **To weigh the impact of undesirable results of actions**
 - ▲ Mitigate negative consequences
- **To identify alternative courses of action**
 - ▲ Better informed decision to execute
- **To address the changing environment of conflict**
 - ▲ Globalization, precision, lethality, asymmetry, adversary



Definition

Test Concept Development and Experimentation



Effects-based Operations

A process for obtaining a desired strategic outcome or “effect” on the enemy through the synergistic and cumulative application of the full range of military and nonmilitary capabilities at all levels of conflict.



Effects-based Ops: EBO

Joint Concept Development and Experimentation



- **Basic concept is not new**
 - ▲ Refocus of planning, executing, assessment cycle
- **Strategic, operational, tactical implications**
- **A compliment to traditional attrition based processes**
- **Method to develop response to asymmetric threat**
- **Can be captured in five interrelated processes**
 - ▲ Knowledge of the adversary, IPB but more
 - ▲ Development of desired outcomes, effects
 - ▲ Application of full range of national capabilities/functions
 - ▲ Assessment of results, were desired effects achieved
 - ▲ Adaptation of Course of Action



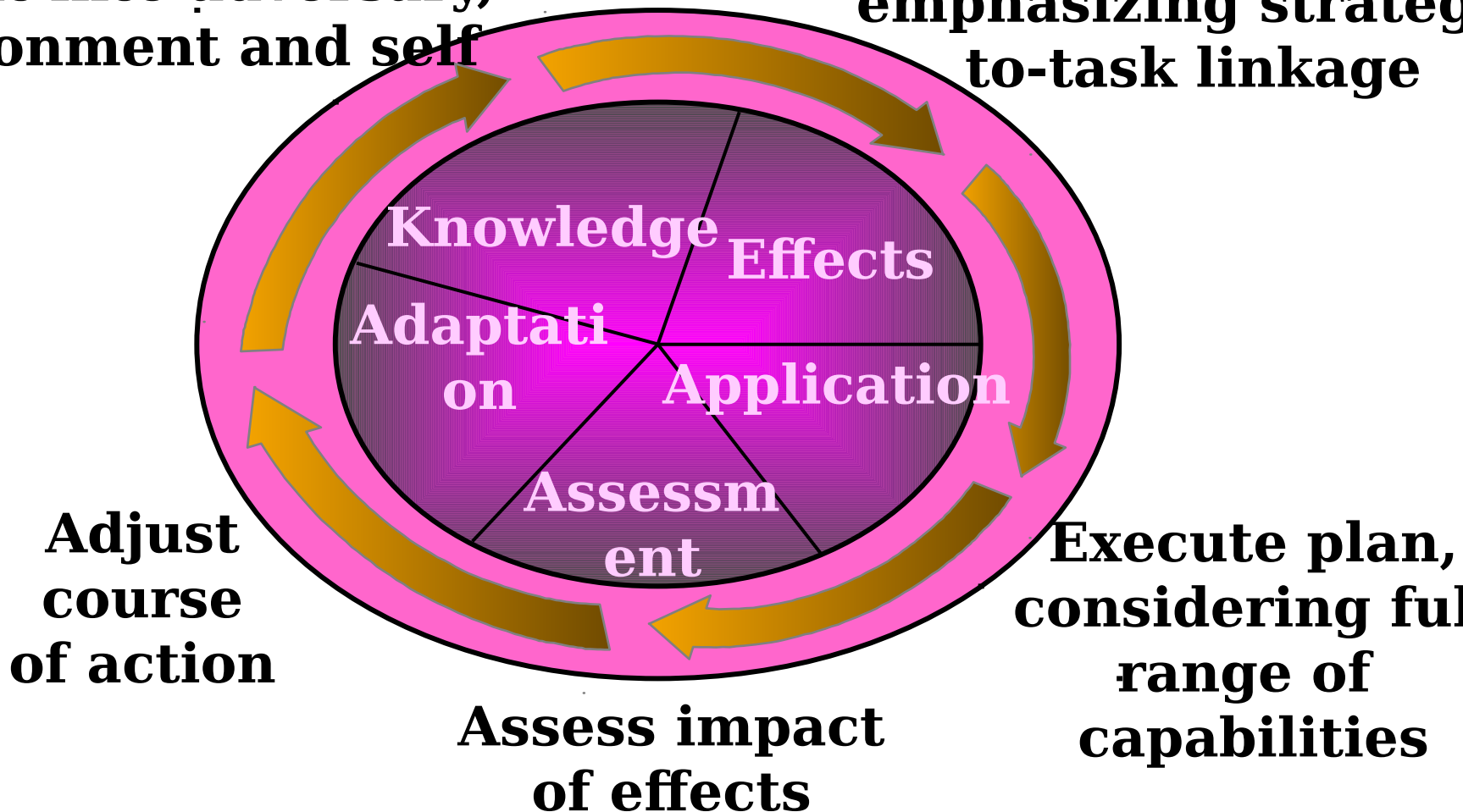
EBO Process



Concept Development and Experimentation

**Develop comprehensive
insight into adversary,
environment and self**

**Plan for effects,
emphasizing strategic
to-task linkage**





Knowledge



Collectors

All Sources Intel

CIA NSA

NIMA

PVOs

NGOs FBI

Academia

Business

NRO DIA

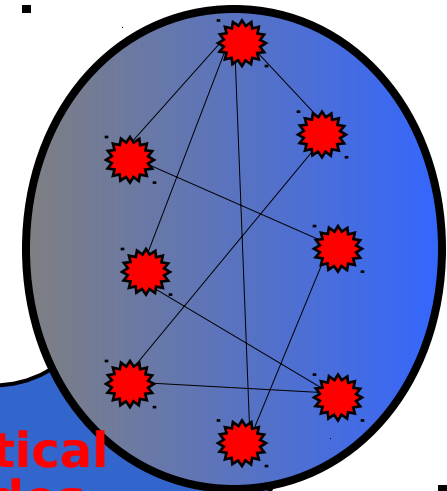
STATE

Open
Source

Understanding
The
Adversary

Analysis

is
Systems of Systems



Critical
Nodes
Vulnerabilities

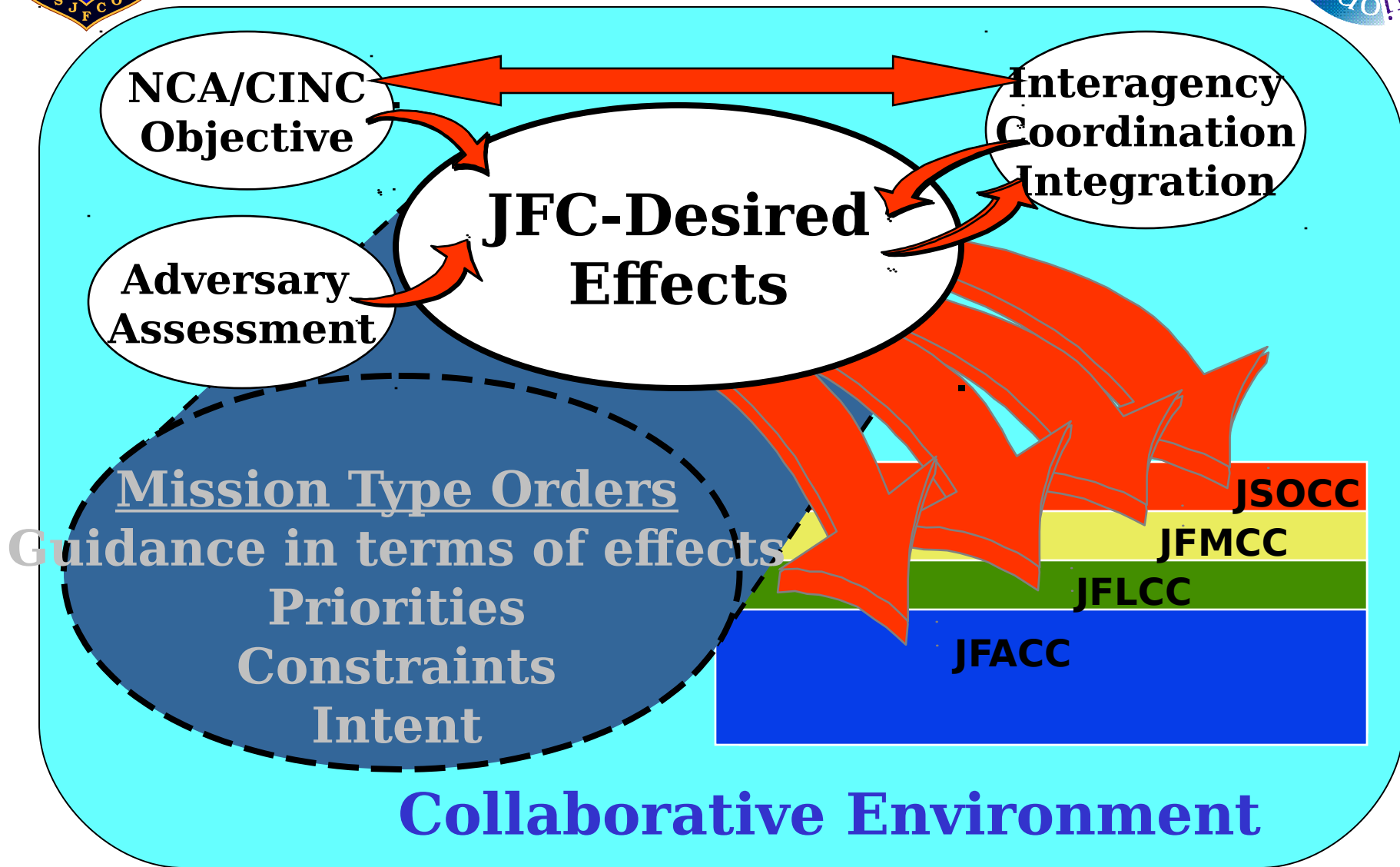
“Effects-based operations cannot be accomplished without a comprehensive understanding of the adversary as *a dynamic and extremely complex adaptive system of systems*” **RDO Concept**



Mission Orders



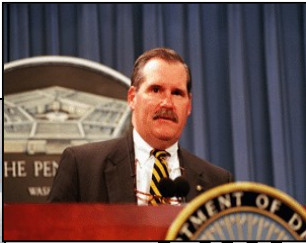
Concept Development and Experimentation





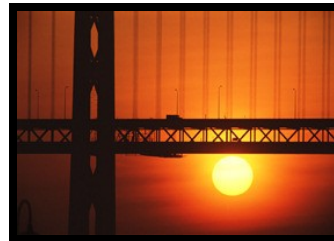
Capabilities Application

Joint Concept Development and Experimentation



Full Spectrum Operational Capabilities

Kinetic and Non-kinetic Lethal and Non-lethal



“Identify and engage the **right targets**, with the **right actions**, at the **right times**, for the **right reasons** (physical, psychological, and temporal precision).”

RDO Concept



Measures



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- **Measures of Effectiveness, MOE: Subjective indicators of the outcomes that tactical actions have produced, or contributed to producing, towards the desired effect**
 - ▲ Articulate where to look, what to measure
 - ▲ Impact on system and contribution to end state
- **Measures of Performance, MOP: The objective metrics of the outcomes of tactical actions.**
 - ▲ Measures success of tactical actions
 - ▲ Roughly equates to combat assessment today
- **Determined during planning**
 - ▲ Tied to theater objectives
 - ▲ ISR assets available and capable



Assessment/Adaptation



Test Concept Development and Experimentation

Planning

- Articulates desired (direct) effect, impact on
- Identifies anticipated effects(indirect, 2nd, 3rd.
- Identifies when, where and what to look for,

Collection

- Integrated ISR assets
- Allocation of ISR assets before, during, after
- Observes node, system, adversary
- Fusion of data

Processing

- Transformation to decision level knowledge
- Presented in useable format

Exploitation

- Assessment of MOEs
- Effects produced, planned, unplanned
- Impact to COA, progress to endstate

Dissemination

- Recommendations to COA
- Update understanding of adversary
- Direct changes



Assessment/Adaptation



Test Concept Development and Experimentation

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Effects Assessment

Test Concept Development and Experimentation



Continuous evaluation of associated MOPs

and MOEs to determine if:

- ▲ Desired effects been achieved
- ▲ Are in the process of being achieved
- ▲ Will not likely be achieved



Potential Value Added

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- **Comprehensive understanding of the adversary**
 - ▲ Deeper insights into moral, mental and physical domains
- **Increased capability to predict/forecast adversary reaction**
 - ▲ Identification of direct, indirect and unintended effects
- **Better reasoned options for the JFC**
 - ▲ COAs to change adversary behavior
- **Greater Potential for:**
 - ▲ Realizing objectives
 - ▲ Reducing uncertainty/risk
 - ▲ Reducing collateral damage
 - ▲ More efficient application
 - ▲ Adapting to enemy actions
- **Assessment of effects achieved vice targets attrited**



A Challenge

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How can we predict with a degree of certainty how an adversary should, can, or could react to compensate for our actions, and how can we adequately plan, execute, assess and adjust our actions in terms of the effects we desire.



The Hurdles



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- **Understanding adversary behavioral influences**
 - ▲ Seeing through his eyes, not ours
 - ▲ Predicting human reaction
- **Intelligence collection**
 - ▲ Likes, dislikes, habits, strengths, weaknesses
- **Fusion of all source intelligence**
 - ▲ Interagency, NGOs, Open Source
- **Organizational Structure**
 - ▲ Size, layers, tools, reach back, parallelism, timeliness
- **Impact of Globalization: “No borders”**
 - ▲ Ma and Pa Kettle own stock in Kosovo Copper
- **Assessing non-physical effects: ISR Assets**
- **Coordinated application of all instruments of national power.**
 - ▲ Interagency mismatch: Technology, process, areas of interest



EBO is not just---

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- A better understanding of things we never knew about
- Increased ability to predict or forecast adversary reach
- Interactive planning with reach back to centers of excellence
- Better reasoned options to change adversary behavior
- New tools to conduct in-depth analysis
- Application of the full range of national capabilities
- Real time ISR before during and after execution
- Assessment of effects: direct, indirect and unintended
- Reduced uncertainty and collateral damage

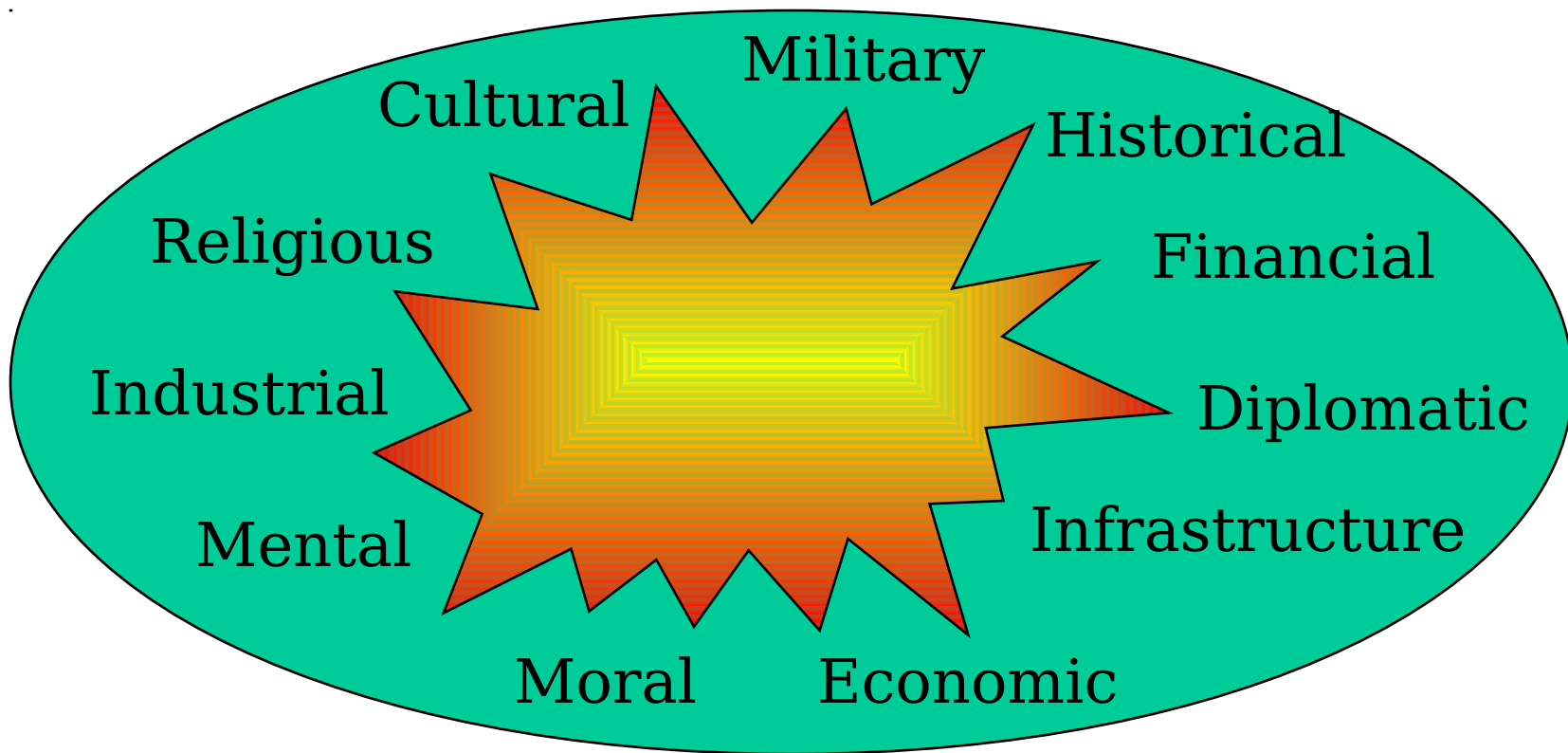


Its about putting it all

together--- Joint Concept Development and Experimentation



Multiple, parallel, coordinated, synergistic a



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Effects-based Operations



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Back Up Slides



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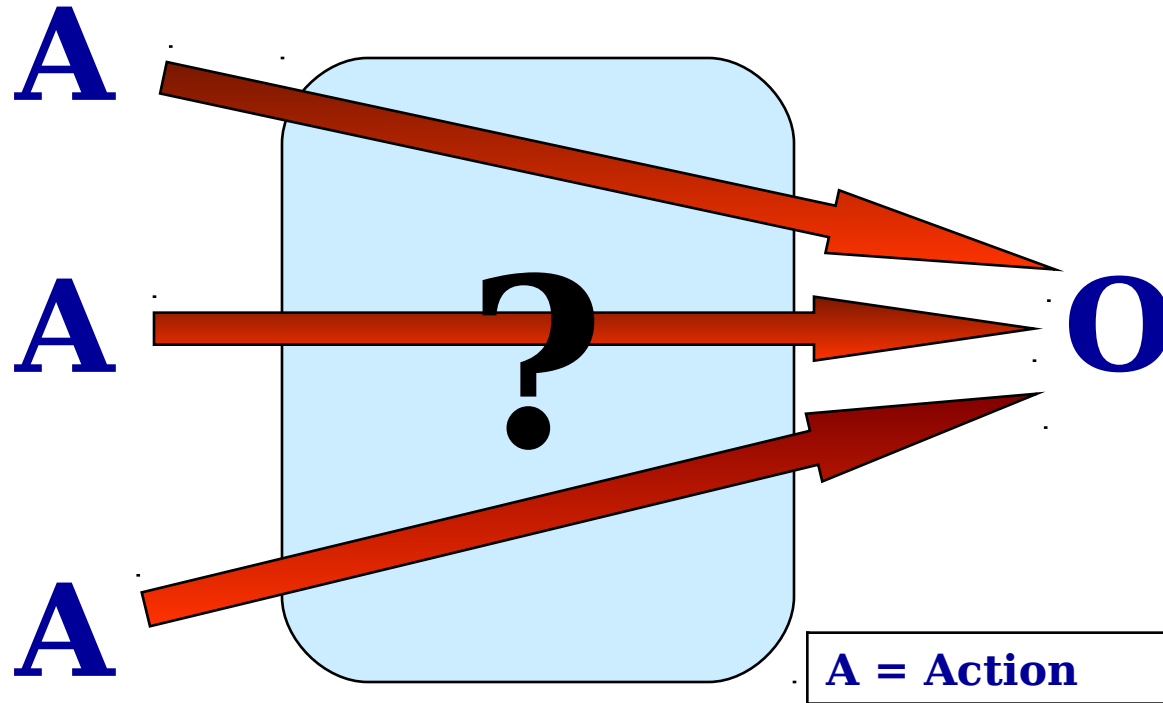


Actions, Causal Linkages, Effects, and Objectives



Objectives-Based Approach

Task Concept Development and Experimentation



A = Action O = Objective

- **Relates clearly stated objectives to proposed actions**
- **Refines objectives through strategy-to-task linkage**
 - **Strategy at one level becomes objective at next lower level**



Relevant Definitions

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Military Objective: The derived set of military *actions* to be taken to implement National Command Authorities guidance *in support of national objectives. Defines the results to be achieved* by the military and assigns tasks to commanders. (DoD Dictionary of Terms)

- Definition embodies the focus of the objective-based approach

Effect: 1. The physical, functional, or psychological outcome, event, or consequence that results from specific military or non-military action (EBO White Paper)

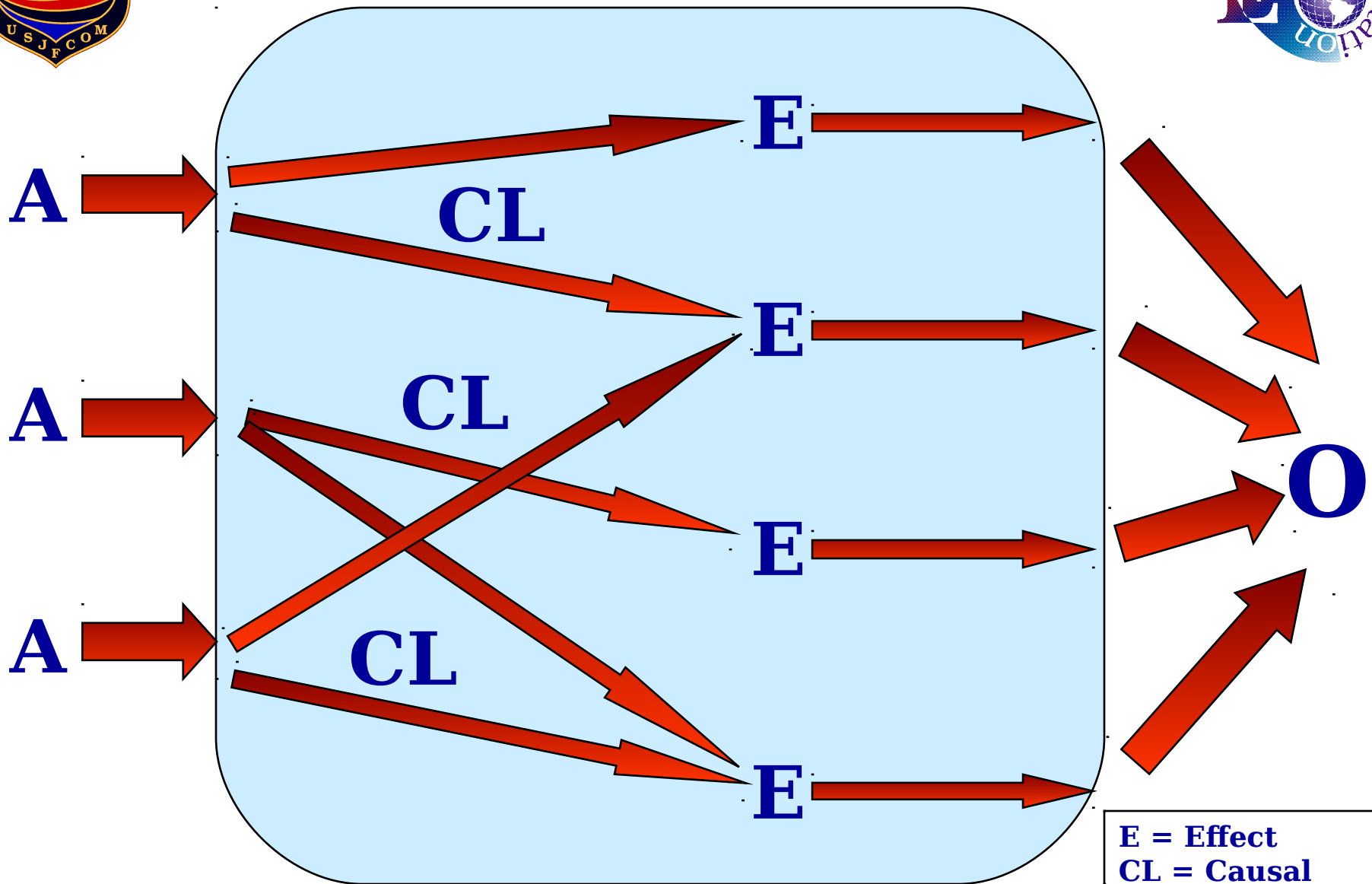
2. To produce as a result (Webster's Dictionary)

- Sounds like military objective, but in the context of an effects-based approach the application is much broader



Effects-Based Approach

Test Concept Development and Experimentation

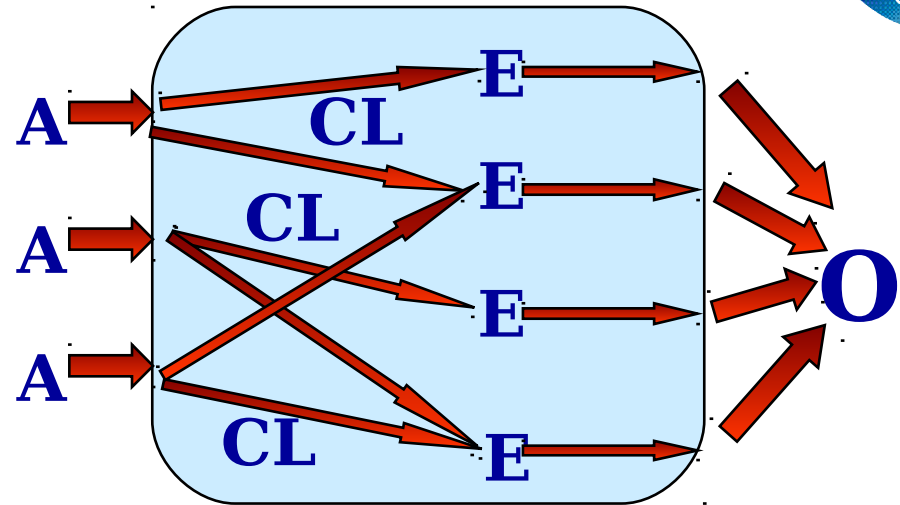
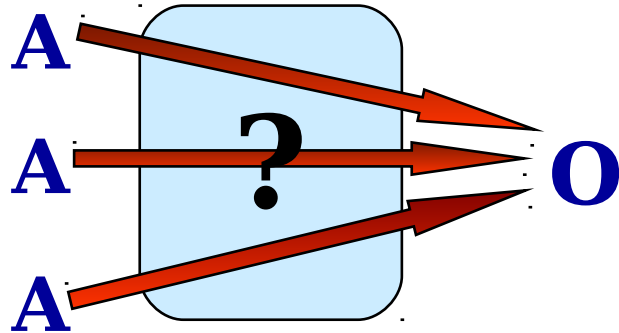


E = Effect
CL = Causal
Linkage



Effects-Based Approach

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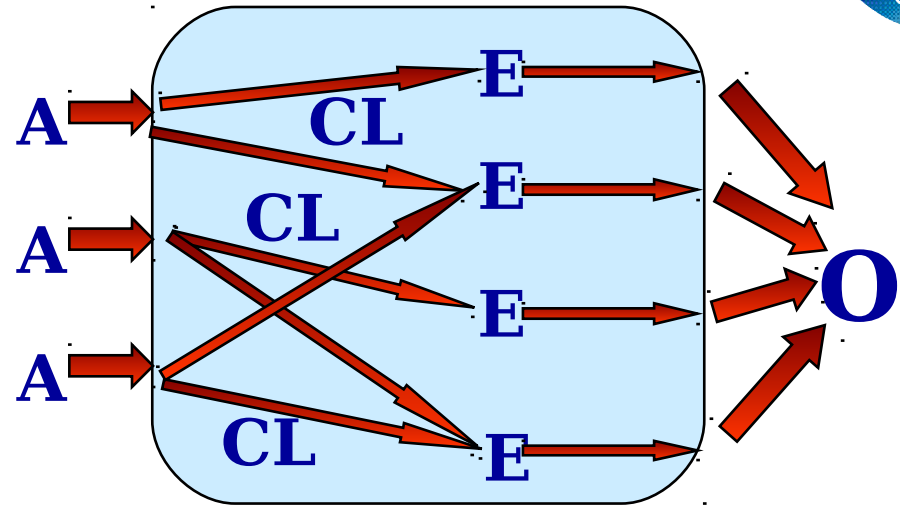
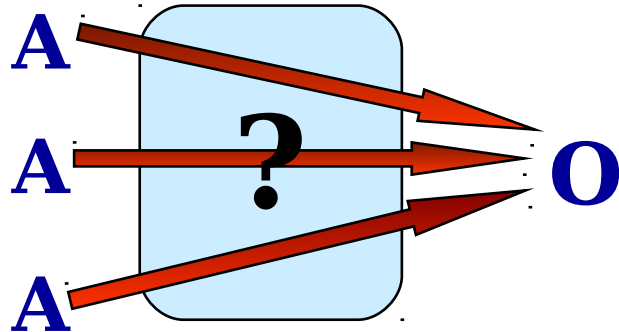


- Takes the objective-based approach one step further
- Utilizes an understanding of the adversary as a system-of-systems
- Focus = Identification of the causal linkages through which actions produce effects
 - What do I know about the adversary (as a system) that makes me believe that an action will produce the desired effect?



EBO Evolutionary Step #1

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By observation:

- More than one action may contribute to achieving a desired effect
- More than one effect may contribute to the accomplishment of an objective

EBO Evolutionary Step #1:

- More than one effect (outcome, event, or consequence) may be produced by a single action



Objective versus Effect - What is the difference?

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Confusion arises from definitions:

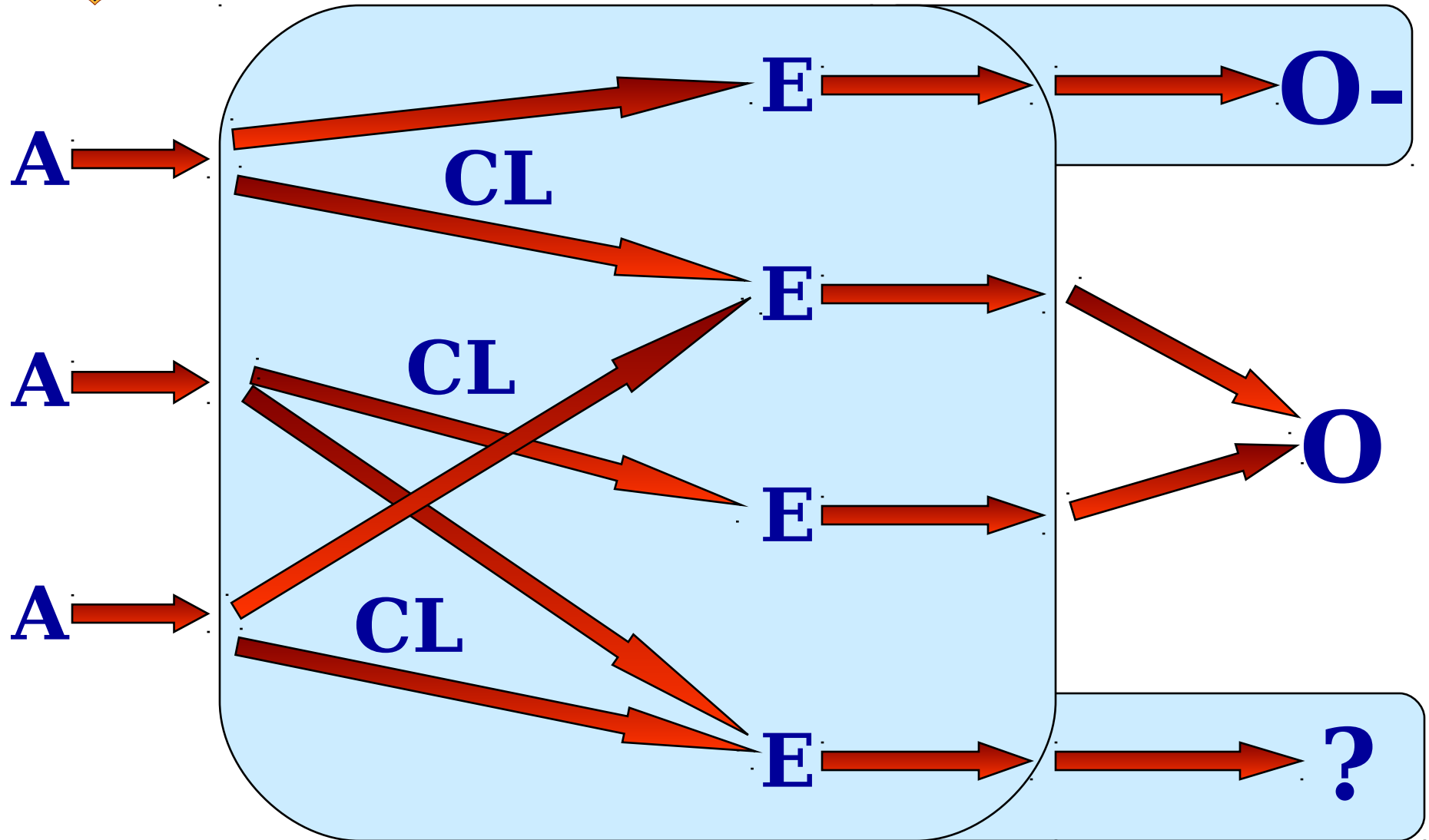
- **Military Objective:** “...the *results* to be achieved...”
- **Effect:** “to produce as a *result*” (Webster’s Dictionary)

The difference is in the scope of results to be considered:

- Objectives are only the *desired* results
- Effects include *all* results of actions, including the undesired and unexpected



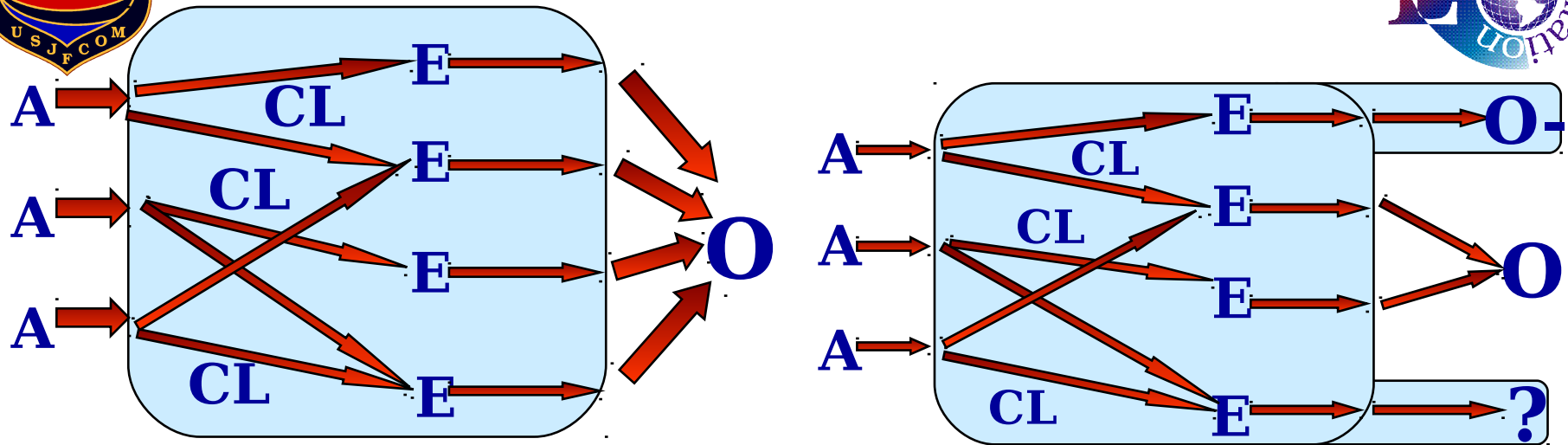
Effects-Based Approach - Part 2





EBO Evolutionary Step #2

Concept Development and Experimentation



Again, by observation:

- More than one action may contribute to achieving a desired effect
- More than one effect may contribute to the accomplishment of an objective

EBO Evolutionary Step #2:

- Some effects may have a negative impact on the desired objective
- It is important to investigate all potential outcomes